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3M™ Conformable Bonding Tape 5078, 5079, 5077RV, 5078RV, and 5079RV

Technical Data Sheet

General Description



3M™ Conformable Bonding Tapes 5078, 5079, 5077RV, 5078RV, and 5079RV offers very good adhesion performance and high flexibility. These tapes are specially designed for rough or highly irregular surfaces, providing strong adhesion for applications such as automotive wire harness assembly, and offering excellent conformability for sealing applications.

3M Conformable Bonding Tapes 5078, 5079, 5077RV, 5078RV, and 5079RV offer the following key features:

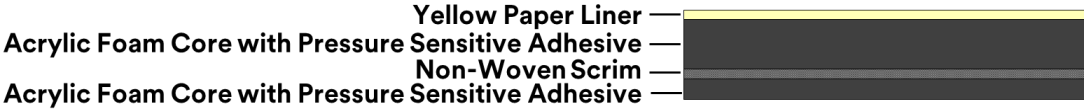
- Excellent initial adhesion and static performance on uneven substrates
- Highly conformable tape for sealing and bonding to rough or irregular surfaces
- It is a flexible black tape with independent foam, allowing it to absorb irregularities and provide sealing and offering more flexibility than 3M™ Acrylic Foam Tapes
- Excellent adhesion performance with superior weather resistance, heat resistance, and chemical resistance
- Can be applied to various substrates used for automotive parts without special surface treatment*

*Note: Depending on the material (e.g., EPDM rubber), 3M™ Adhesion Promoter may be required. Please check before use.

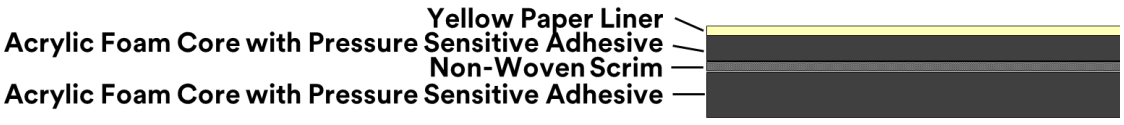
Typical applications for 3M Conformable Bonding Tapes 5078, 5079, 5077RV, 5078RV, and 5079RV include sealing or bonding support for weather-strips, various interior or exterior part attachment, foam bonding, and fixing wire harness to the headliner.

Product Construction

5078, 5079



5077RV, 5078RV, 5079RV



Physical Properties

Property	5078	5079	5077RV	5078RV	5079RV
Core	Acrylic Foam Core				
Core Color	Black				
Scrim	Non-woven				
Thickness*	1.0 mm	2.0 mm	0.5 mm	1.0 mm	2.0 mm
Liner	Opaque, light yellow, paper liner				

*Liner thickness is not included

Performance Properties

3M understands that development of automotive applications is typically driven by specification requirements and performance. Each OEM has their own unique criteria, and 3M continues to develop products to meet those demands. Test reports are available upon request. Please contact your 3M application engineer for support and to obtain specific test data.

Typical performance of 3M Conformable Bonding Tapes (CBT) 5078, 5079, 5077RV, 5078RV, and 5079RV is shown below. Peel and shear values depend on substrate characteristics and/or paint composition. These values are for reference only, and not to be used for specification purposes. For specification values please see the certificate of analysis.

Conditions/Test Parameter Definitions:

- Initial State = 23°C, 20 mins
- Normal State = 23°C, 24 hours
- High Temperature = 23°C, 24 hours -> 80°C
- Heat-aging = 23°C, 24 hours -> 80°C, 336 hours -> 23°C, 24 hours
- Warm Water Immersion = 23°C, 24 hours -> 40°C water, 336 hours -> 23°C, 24 hours
- Wax-remover immersion = 23°C, 24 hours -> wax-remover, 1 hour -> 23°C, 24 hours
- Immediate state = 5, 23, 40°C, 30 seconds

180° Peel Adhesion to Painted Panel and Polypropylene (PP) Substrate
3M CBT 5078 and 5079: liner side adhesion; 3M CBT 5077RV, 5078RV, and 5079RV: non-liner side adhesion; Tape Size: 10 mm width; Tape backing: 25 µm PET film; Rolling Pressure: 2 kg roller one-way; Peel Speed: 50 mm/min.

Substrate	**Conditions/Test Parameters**	**Typical Performance Value (N/cm)**				
		5078	**5079**	**5077RV**	**5078RV**	**5079RV**
Painted Panel[1] without Adhesion Promoter	Initial State	14.0	18.0	11.0	14.0	18.0
	Normal State	14.0	18.0	12.0	14.0	18.0
	High Temperature	6.0	8.0	5.0	6.0	8.0
	Heat-aging	18.5	23.5	16.0	18.5	23.5
	Warm Water Immersion	18.5	23.0	14.1	18.5	23.0
	Wax Remover Immersion	13.5	18.0	10.5	13.5	18.0
PP with 3M™ Adhesion Promoter K520	Initial State	14.0	18.0	12.0	14.0	18.0
	Normal State	14.0	18.0	12.0	14.0	18.0
	High Temperature	6.0	8.0	5.0	6.0	8.0
PP without Adhesion Promoter	Initial State	8.8	9.8	6.3	8.8	9.8
	Normal State	9.8	10.8	6.7	9.8	10.8
	High Temperature	2.9	2.9	2.7	2.9	2.9

90° Peel Strength to Painted Panel
3M CBT 5078 and 5079: liner side adhesion; 3M CBT 5077RV, 5078RV, and 5079RV: non-liner side adhesion; Tape Size: 10 mm width; Tape backing: 25 µm PET film; Rolling Pressure: 2 kg roller one-way; Peel Speed: 300 mm/min.

Substrate	**Conditions/Test Parameters**		**Typical Performance Value (N/cm)**				
			5078	**5079**	**5077RV**	**5078RV**	**5079RV**
Painted Panel[1] without Adhesion Promoter	Immediate State	5°C	11.8	14.0	7.3	11.8	14.0
		23°C	16.8	23.1	8.3	16.8	23.1
		40°C	16.8	23.1	9.5	16.8	23.1

[1] Painted panel: White colored painted panel used on a vehicle

Static Shear Holding Power on Paint and Ethylene Propylene Diene Monomer Rubber (EPDM) 3M CBT 5078 and 5079: liner side adhesion; 3M CBT 5077RV, 5078RV, and 5079RV: non-liner side adhesion; Tape Size: 10mm x 25mm; Rolling pressure: 5kg roller one-way;							
Substrate	**Conditions/Test Parameters**		**Holding Power (g)**				
			5078	**5079**	**5077RV**	**5078RV**	**5079RV**
Painted Panel[1] and EPDM with 3M™ Adhesion Promoter K520	Normal State	23°C	400	500	300	400	500
		40°C	300	400	200	300	400
		60°C	200	300	150	200	300
		80°C	100	100	75	100	100

[1] Painted panel: White colored painted panel used on a vehicle

Shelf Life

Three years from date of manufacturing when stored in general indoor warehouse conditions, defined as approximately 4°C-38°C(40°F-100°F) and 30-70% relative humidity. The optimum storage conditions are 22°C (72°F) and 50% relative humidity.

Regulatory Information

The product is published as a material entry and is available for access on www.mdsystem.com. For product IMDS I.D. number, email requests to 3M-IMDSrequest@mmm.com.

Contact Information

The information provided in this technical document is intended as a guide for this product. For more information or help in selecting a 3M product for an application, please contact your 3M application engineering representative or connect with a 3M expert.

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